

CALIFORNIA STATE BOARD OF HEALTH

Weekly

Bulletin

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EDITOR

SMALLPOX CONTROL MEASURES.

By HENRY F. VAUGHAN, D. P. H., Commissioner of Health, Detroit, Michigan.

Smallpox is a disease which has been recognized by medical men for more than two thousand years. Eruptions found on the skin of a mummy show the existence of smallpox in Egypt about 1200 B.C. Crude preventive measures were used in India in the third century B.C. to supersede and accompany the special prayers chanted by the Brahman priests. Inoculation of healthy individuals with the smallpox material produced a mild form of the ailment, but was preferred by our ancestors to the disease contracted in the natural way with its accompanying high fatality rate.

Devastating epidemics depopulated continental Europe in the middle ages, and crossing the channel played great havoc in London, being accountable in some years for a large per cent of deaths.

In 1721 a ship from the Barbados brought smallpox into Boston. The population of the city, as given at that time, was 10,565. In the course of the epidemic, 5,989 persons, more than half the population, were attacked.

In 1738 a great epidemic occurred in Charleston, South Carolina. An American physician, Kilpatrick, successfully protected more than eight hundred people in this city by the inoculation method.

In 1796 an Englishman, Jenner, a country doctor, had an opportunity to give the smallpox inoculation to several individuals who had previously had cowpox, and he found that it did not take in any of these. He then decided to inoculate someone with cowpox and sub-

sequently with smallpox. Accordingly he took some matter from the sore of cowpox on the hand of a dairy maid and inoculated a healthy boy, James Phipps. This succeeded, the result being very much the same as that secured by inoculation smallpox. After a period of six weeks Jenner endeavored to give the lad smallpox, but found that he was not only protected from inoculation smallpox, but could not contract the disease in the natural way. This marks the beginning of vaccination.

When we practice vaccination we do not use the germ of smallpox, it is the seed of cowpox which gives such complete protection against the severer disease.

We thus find that smallpox has been recognized since the beginnings of history, and we have had an adequate and satisfactory method of control for one hundred thirty years. Smallpox is the easiest disease to prevent or control, but much depends on individual cooperation, as each person must secure his own protection by vaccination and revaccination.

Figures are available and abundant statistical quotations could be made to show that smallpox is still with us, not infrequently a heavy contributor to the death rate. The perusal of the monthly epidemiological report of the League of Nations will show the greater prevalence of this ailment in the United States and Great Britain than in the remaining countries of Europe, Asia and Africa. This condition is doubtless due to our false sense of individual security, and

our unwarranted forgetfulness together with our refusal to give the matter serious consideration.

Considerable anxiety has been felt about the smallpox outbreak in the north and midlands of England. In the United States recent years have seen thousands of smallpox cases in the northwestern states, in the middle west, and on the Pacific slope, while the New England, the middle Atlantic states, and Maryland have been comparatively free.

The health officer of Providence stated in 1921 that during the last fifty years only one school child had contracted smallpox in his city, a boy who had escaped vaccination, while the health officer of Philadelphia significantly records in 1923 that there has not been a case of smallpox in a native Philadelphian during the past fourteen years.

The New England and Atlantic states have laws which require the vaccination of all school children. In localities where this law is thoroughly enforced, smallpox rarely appears among the native population. The inhabitants of such a community are comparatively secure unless their tranquillity be interrupted by the introduction of an unvaccinated element from without. There must then be revaccination for the native population if it will prolong its security, since a single successful vaccination does not give life-long protection to all individuals.

In 1924 virulent smallpox appeared in one of our large mid-west industrial centers, and it is significant to note that the disease did not occur among those showing successful vaccination of less than seven years standing. Ten per cent of the cases were among those whose vaccinations were very old, which proves that vaccination, once in a lifetime, to those exposed to the disease, is not sufficient. Ninety per cent of the cases were among those who had never been vaccinated.

There is no American community so snug and secure that it can claim no smallpox problem. In order to exist such a city would either have to be completely isolated from the remainder of the world, or each man, woman and child would have to be revaccinated against smallpox about every seventh year and there could be no exception. Therefore, the Utopia does not exist and vaccination and revaccination must be practiced faithfully and with regularity if we will remain smallpox free.



There should be no more thence an infant of days, nor an old man that hath not filled his days; for the child shall die an hundred years old.—Isaiah LXV: 20.

Don't Run Motor In Closed Garage.

Every year, with the advent of colder weather, deaths occur from carbon monoxide poisoning due to running automobiles in closed garages and every year health departments issue warnings against these accidents similar to the following:

"Every one who drives an automobile should know something about the hazards to health and life of the automobile exhaust gases. These gases contain the deadly carbon monoxide which causes death by asphyxiation.

Do Not Run the Engine in a Closed Garage.

It is known that when an automobile runs even for a few minutes in a closed garage enough carbon monoxide gas is discharged with the exhaust into the air to make it dangerous and even fatal for any person to breathe it. Deaths from this cause may be prevented by not permitting the motor to run when an automobile is in a closed garage. Automobile mechanics who work in repair shops where more or less running of the motors is necessary often suffer from headache and other symptoms due to mild carbon monoxide poisoning.

Auto Engine Exhaust Gas is Poisonous.

This gas exerts its poisonous effect in a peculiar manner. It combines with the hamoglobin or red coloring matter of the red blood corpuscles in the blood and renders it incapable of taking oxygen from the air in the lungs and carrying it to tissues in other parts of the body. When the blood can not take up and carry oxygen, the body suffers from asphyxiation. Even when so small an amount as one part of carbon monoxide to 500 parts of air exists the blood absorbs enough to put from one-third to one-half of its red cells out of the oxygen carrying business in from thirty to forty minutes. This is enough to cause severe illness, with headache, nausea, vomiting and dizziness. If the absorption of carbon monoxide goes on until from 60 to 75 per cent of the red blood cells lost their power to carry oxygen to the tissues, death will result.

Carbon monoxide comes from a variety of sources besides the automobile. The gas stove or the coal furnace may give off carbon monoxide in large amounts if combustion is not complete. Artificial gas contains carbon monoxide in sufficient quantity to kill in a short time.

Carbon monoxide has no color, taste or odor and therefore may be breathed without knowing it.

Not being able to detect the presence of the gas with the senses preventive measures must follow the line of making sure that none of the gas is given off into the air we breathe. In the case of automobiles, this can be done by *not letting the engine run while the car is in the garage.*



Little Danger In Anti-Knock Compound.

Gasoline containing an anti-knock compound has been placed upon the market recently in California. Because of the fact that this compound is said to have caused illness and death in men who handled it in an eastern manufacturing plant, some time ago, many inquiries concerning the safety of using gasoline containing this compound have come to the California State Board of Health. In response to these requests for information the Board has made an investigation and has determined to its own satisfaction that consumers of gasoline containing this anti-knock compound incur no risk to their health in using this mixture *for motor power purposes* as it is now sold in California. As a matter of fact, gasoline containing this compound is not adapted for other than motor power purposes. Its only advantage is said to lie in its property as an anti-knock fuel when burned in gasoline motors.

The vendors of this gasoline state that the only possible danger in handling this fuel lies in the mixing process. This may involve a certain danger to the individuals engaged in the work. To overcome this danger the manufacturers of the compound insist that all mixing plants be constructed and maintained in accordance with regulations promulgated by the manufacturers. All such plants, before being placed in operation, are inspected by a representative of the manufacturer in order to make certain that the equipment and methods used are correct. Furthermore, it is required that all men who are to be employed in the plant shall be given thorough medical examinations by company physicians.

A very minute amount of the anti-knock compound is added to the gasoline—but one part to 2533 parts of gasoline. In other words, there are but four ounces of the compound, half a cup, in every fifty gallons of gasoline. In other parts of the country a higher proportion is used but the manufacturers state that half the quantity is used in gasoline on the Pacific coast.



Living by rule is difficult. Living by
luck is hazardous.

Child Hygiene Bureau Reports.

In its biennial report, the Bureau of Child Hygiene has the following statement concerning its assistance in child health conferences:

The goal toward which our nurses are working is the saving of maternal and infant lives. The means to this end is frequently the establishment of a health center at which mothers can be advised on hygiene, both for themselves and for their young children. We lend our nurses every assistance possible to the establishment of a health center in their territory, both by personal visits of our staff to examine children and by interesting the local physicians, as well as the women and mothers of the community. As the result of this plan, 29 centers have been opened to mothers for conference service. Local physicians who are interested in the health of children render the medical service in these conferences. They receive no compensation for this work, other than the opportunity of handling a large group of children. This type of clinical material is always of advantage to a physician. In some instances the local physicians are not willing to render this service; then the nurse gives advice to the mothers on the general hygiene of their children, discussing such matters as regularity of feeding, sun baths, establishment of proper habits of elimination, ventilation, bathing and so on; this assists mothers in maintaining the health of their children. In the past years, 43,315 children have been handled by our field staff.



MORBIDITY.*

Diphtheria.

123 case of diphtheria have been reported, as follows: Alameda County 3, Alameda 5, Berkeley 1, Oakland 9, Butte County 4, Chico 4, Colusa 1, Humboldt County 1, Kern County 4, Los Angeles County 10, El Monte 2, Glendale 2, Huntington Park 2, Long Beach 1, Los Angeles 35, Pasadena 1, San Gabriel 1, Santa Ana 2, Auburn 1, Sacramento 2, San Bernardino County 2, San Bernardino 1, San Diego County 1, San Francisco 10, Stockton 3, Tracy 2, San Mateo County 1, Redwood City 4, San Jose 1, Santa Cruz 1, Rio Vista 1, Modesto 1, Lindsay 2, Riverside County 1, Visalia 1.

Scarlet Fever.

173 cases of scarlet fever have been reported, as follows: Berkeley 4, Hayward 1, Oakland 9, Contra Costa County 2, Chico 1, Kern County 7, Los Angeles County 12, Alhambra 4, Arcadia 1, Compton 1, El Segundo 2, Glendale 1, LaVerne 1, Long Beach 11, Los Angeles 48, Pasadena 4, Pomona 1, Sierra

* From reports received on January 3 and 4 for week ending January 1.

Madre 1, Lynwood 2, Signal Hill 1, Barnes City 1, Orange County 3. Anaheim 1, Huntington Beach 4, Santa Ana 2, Auburn 1, Sacramento 2, San Bernardino County 1, San Bernardino 4, National City 1, San Francisco 14, San Joaquin County 1, Lodi 1, Stockton 3, Paso Robles 1, San Mateo County 2, Santa Maria 1, Santa Clara County 4, San Jose 3, Santa Cruz 1, Healdsburg 1, Santa Rosa 1, Modesto 1, Turlock 1, Oxnard 1, Yolo County 1, Visalia 2.

Measles.

753 cases of measles have been reported, as follows: Alameda County 4, Alameda 23, Berkeley 27, Livermore 3, Oakland 124, Butte County 17, Chico 10, Oroville 3, Contra Costa County 3, El Dorado County 10, Fresno 11, Inyo County 1, Kern County 2, Hanford 1, Los Angeles County 12, Long Beach 19, Los Angeles 52, Monrovia 1, Pasadena 1, Pomona 1, Whittier 5, Merced County 2, Salinas 1, Orange County 6, Anaheim 1, Fullerton 3, Huntington Beach 49, Sacramento 44, San Bernardino County 4, Redlands 6, Rialto 3, San Bernardino 35, San Francisco 58, San Joaquin County 49, Lodi 7, Stockton 62, San Mateo County 1, Burlingame 1, Santa Barbara 19, Santa Clara County 7, Gilroy 1, Morgan Hill 1, Palo Alto 23, San Jose 7, Solano County 1,

Benicia 1, Santa Rosa 1, Turlock 1, Sutter County 10, Yuba City 1, Tuolumne County 1, Sonora 1, Yolo County 2, Davis 6, Woodland 2, Visalia 1, Riverside County 2, Riverside 3.

Smallpox.

6 cases of smallpox have been reported, as follows: Kern County 4, Los Angeles 1, Manteca 1.

Typhoid Fever.

7 cases of typhoid fever have been reported, as follows: Chico 1, Los Angeles 4, Madera County 1, Redlands 1.

Whooping Cough.

46 cases of whooping cough have been reported, as follows: Berkeley 2, Oakland 5, El Cerrito 2, Pittsburg 3, Selma 1, Los Angeles County 5, Alhambra 2, Glendale 1, Long Beach 5, Los Angeles 10, Pasadena 2, San Francisco 7, Stockton 1.

Anthrax.

Los Angeles reported one case of anthrax.

Meningitis (Epidemic).

Two cases of epidemic meningitis have been reported, Stockton 1 and San Francisco 1.

COMMUNICABLE DISEASE REPORTS.

Disease	1926				1925			
	Week ending			Reports for week ending Jan. 1 received by Jan. 4	Week ending			Reports for week ending Jan. 2 received by Jan. 5
	Dec. 11	Dec. 18	Dec. 25		Dec. 12	Dec. 19	Dec. 26	
Anthrax	0	0	0	1	0	0	0	0
Botulism	0	0	0	0	0	0	0	0
Chickenpox	477	259	230	229	373	184	155	206
Diphtheria	173	184	156	123	115	136	76	76
Dysentery (Bacillary)	1	1	4	0	4	0	0	0
Encephalitis (Epidemic)	1	0	4	0	2	4	1	3
Gonococcus Infection	108	79	62	76	77	141	43	63
Influenza	34	25	34	36	25	40	101	120
Jaundice (Epidemic)	2	0	0	0	0	0	0	0
Leprosy	1	2	1	0	0	0	0	0
Malaria	3	0	0	0	0	0	1	1
Measles	1045	873	596	753	34	26	14	28
Meningitis (Epidemic)	1	1	5	2	7	7	3	2
Mumps	224	137	57	83	291	124	119	139
Paratyphoid Fever	1	0	0	0	0	1	0	0
Pneumonia (Lobar)	51	51	99	97	93	75	49	62
Poliomyelitis	7	3	0	0	4	7	7	2
Rabies (Animal)	8	6	5	6	14	3	4	6
Rabies (Human)	0	0	0	0	0	0	0	0
Rocky Mt. Spotted Fever	0	0	0	0	0	0	0	0
Scarlet Fever	236	274	252	173	143	147	95	126
Smallpox	15	4	10	6	51	64	62	48
Syphilis	146	101	78	112	132	102	68	87
Tetanus	0	0	1	2	0	2	0	1
Trachoma	9	87	5	0	2	6	0	1
Trichinosis	0	0	0	0	0	0	0	1
Tuberculosis	141	152	124	156	242	160	193	116
Typhoid Fever	13	16	17	7	9	17	14	8
Typhus Fever	0	0	0	0	0	0	0	0
Whooping Cough	72	41	52	46	99	32	36	64
Totals	2769	2296	1792	1908	1707	1278	1041	1161

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